STATE OF CALIFORNIA
ENERGY RESOURCES CONSERVATION
AND DEVELOPMENT COMMISSION

In the Matter of:	)	Docket No. 04-IEP-1G
The Preparation of the 2005 Integrated	)	2005 Energy Report:
Energy Policy Report (Energy Report)	)	Comments on Electricity
	)	Environmental Performance
	)	Report

REPLY COMMENTS OF THE CALIFORNIA WIND ENERGY ASSOCIATION AND KERN WIND ENERGY ASSOCIATION ON THE 2005 ELECTRICITY PERFORMANCE REPORT AND RELATED DOCUMENTS

Pursuant to the June 16, 2005, Notice of Committee Workshop, the California Wind Energy Association ("CalWEA") and the Kern Wind Energy Association ("KWEA") hereby submit reply comments on the 2005 Electricity Performance Report ("EPR"),[1] which evaluates the environmental trends for each of the generation technologies and identifies issues and policy options for consideration by the Governor, Legislature and other decision-makers. The report, along with supporting materials, is intended to provide an analytical basis for policy discussions and options that may be incorporated into the Energy Commission's 2005 Integrated Energy Policy Report ("IEPR").

To the extent that the EPR appears to draw from them, we also comment on the supporting documents, including the June 2005 Assessment of Avian Mortality from Collisions and Electrocutions ("Avian Assessment")[2] and the August 2004 PIER report by Smallwood and Thelander ("Smallwood/Thelander Report").[3] We concur generally with the detailed comments previously submitted on the Smallwood/Thelander Report by Carol Pilz Weisskopf ("Weisskopf Comments") in this docket.[4] We may provide more detailed comments on the Avian Assessment at a later date.

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[1] California Energy Commission Staff Report, "2005 Environmental Performance Report of California's Electrical System" (CEC-700-2005-016). June 2005.

[2] California Energy Commission Staff Report, "Assessment of Avian Mortality from Collisions and Electrocutions" (CEC-700-2005-015). June 2005.

[3] Smallwood K.S. and C.G. Thelander, "Developing Methods to Reduce Bird Mortality in the Altamont Pass Wind Resource Area," PIER Final Project Report 500-04-052, August 2004.

[4] Carol Pilz Weisskopf, Ph.D., "A Review of Avian Fatality Data in the Altamont Pass Wind Resource Area," submitted in this docket on July 1, 2005.

CalWEA represents over 20 members of the wind energy industry, including turbine manufacturers, component suppliers, consultants, project developers, and project owners representing over 200 megawatts of capacity operating in all four of California's major wind resource areas.

KWEA, with 20 industry members, specializes in local issues in Southern California associated with land use planning, military interference, safety and transmission for the promotion of positive development and growth of the wind energy industry.

A. INTRODUCTION AND SUMMARY

The wind industry generally, and CalWEA in particular, recognizes that wind-related avian fatalities is an important issue and that the wind industry needs to take appropriate and substantial measures to address it. However, mitigation (and litigation) must be based on sound science if these measures are to significantly reduce fatalities while enabling wind energy to contribute to the state's clean energy goals and thereby deliver the significant environmental benefits noted in the EPR. These benefits include electricity with very limited impacts on California's air and water resources and limited impacts on land use.

Certain statements in the EPR and the Avian Assessment are based, at least in part, upon a particular consultant report, the Smallwood/Thelander Report, about whose scientific quality CalWEA has significant concerns. This report contains inaccurate mortality estimates that are being relied upon as fact not only for the IEPR process, but by county governments, federal agencies, environmental litigators, the media, and most recently by the California Attorney General's office.

These flawed reports threaten to damage the wind energy industry throughout California – and potentially the achievement of the state's RPS goals – while offering very little in the way of proven techniques for reducing avian fatalities.

The following points summarize our comments and recommendations discussed in more detail in section B.

- **The wind-related mortality figures stated in the EPR and supporting documents are inaccurate, misleading and inflammatory.** Wind-related avian mortality should be placed in the proper context as a small part of the overall avian fatality problem.

- **The EPR's suggestion that the Migratory Treaty Bird Act should be used as a tool to reduce fatalities is inappropriate.** The U.S. Fish & Wildlife Service works with industries to reduce mortality before pursuing criminal prosecution. This is especially relevant to wind-related avian fatalities, given the larger context.

- **Contrary to EPR statements, avian issues do not constitute a "serious constraint" to wind development outside of the Altamont.** This faulty premise underlies EPR proposals for the development and imposition of statewide standards and the imposition of (untested) mitigation measures.

- **The Smallwood/Thelander Report (and statements in the EPR and Avian Assessment that rest on this report) should be rejected as a basis for any statements and recommendations in the IEPR.** Further, the Commission should take steps to prevent its misuse as a basis for policy making, litigation, and public perception.

- **The Commission should subject the Smallwood/Thelander Report to an independent review of its scientific validity, as well as to public review, which has not occurred.** If methodological errors and unsubstantiated conclusions are found, the Commission should institute protocols to ensure that such problems do not occur in the future.

- **The Commission has a responsibility to ensure that all of the data from the Smallwood/Thelander Report are immediately released to the public.** (Contrary to standard practice in publicly-funded studies, only a portion has heretofore been released.)

- **Biological significance has not been shown either by the Smallwood/Thelander Report or by the Energy Commission.** This has important implications for the Commission's recommendations regarding mitigation and other policies. Biological significance cannot be judged by lack of compliance, or indeed, compliance with, the Migratory Bird Treaty Act or even the Endangered Species Acts.

- **Proposed mitigation measures, including winter shutdowns, are based on underlying assumptions that have not been subjected to peer-review, let alone proven.** Compounding this problem is a lack of understanding of the potential causes of mortality. Were these untested mitigation measures to be imposed, they would be unlikely to produce the projected reductions in mortality while imposing significant costs on the industry. Therefore, Commission adoption of such recommendations prior to establishing a sound scientific basis would be reckless.

- **The Buena Vista repower project may have trouble maintaining its financing and getting built given the current climate of litigation -- litigation that enlists the conclusions of the Smallwood/Thelander Report -- and regulatory uncertainty.** The permits for this project incorporate many of the latest Smallwood/Thelander Report recommendations. The project's future operation is widely viewed as an important test of these new measures over the next three years.

- **There is no need to "confirm" low mortality in Tehachapi, Pacheco and San Gorgonio.** If additional studies are conducted, appropriate methods must be used;

the methods currently being employed by Commission-funded consultants require peer- and public review. The Commission ought not to expend resources when there is no evidence of a problem.

- **Avian studies and mitigation are being appropriately handled by local agencies in their role as the lead agency implementing CEQA.** Contrary to the EPR's proposition that statewide guidelines may be an appropriate way to gain consistency when developing and mitigating projects, environmental assessment is highly site-specific. County-level control of the process is therefore appropriate.

B. SPECIFIC RESPONSES TO STATEMENTS IN THE 2005 EPR, AVIAN ASSESSMENT, AND SMALLWOOD/THELANDER REPORT

1. The Commission Should Place The Wind-Avian Problem In Context

a. Wind-related avian mortality is a small part of the overall problem

The EPR states (on p. 3), "California's wind energy farms are killing thousands of hawks, eagles and other birds each year. Thousands more are killed through collision or electrocution with electric power lines." This inflammatory remark fails to put wind-related bird kills in the proper context. While no one disputes that birds are being killed by wind turbines, the U.S. Fish and Wildlife Service (USF&WS) estimates that wind turbines kill an estimated 33,000 birds annually in the U.S., while strikes at communication towers "conservatively kill 4 to 5 million birds annually (possibly closer to 40 to 50 million…)" nationwide.[5] There are, of course, many other sources of bird kills, such as the two million birds killed annually in oil and wastewater pits, mainly in the western states, and the 72 million birds killed directly by pesticides annually.[6]

To put the issue into further context, wind-related avian fatalities would still constitute a tiny fraction of the total even if (a) all of these U.S. wind-related bird kills were assumed to be in California, (b) California expanded its wind capacity four-fold (consistent with Energy Commission scenarios), and (c) the expanded capacity had the same fatality rates as the Altamont (even though virtually all of that development will occur outside of the Altamont, mostly in Tehachapi where avian fatalities are known to be low). In this extreme scenario, wind-related avian fatalities would still constitute a tiny fraction of the total human-caused avian fatalities in the U.S.

Again, this is not to discount the wind-related bird-kill problem; but policy makers need to understand the problem in a larger context.

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[5] U.S. Fish & Wildlife Service, "Migratory Bird Mortality: Many Human-Caused Threats Afflict our Bird Populations," January 2002.

[6] *Ibid*.

b. The stated wind-related mortality figure is inaccurate and misleading

The EPR states (on p. 5), "At the Altamont Pass Wind Resource Area in Alameda County, estimates of bird mortality range from 881 – 1,300 raptors and 1,766 – 4,721 total birds killed annually." These figures, derived from the Smallwood/Thelander Report, are seriously flawed. They should not be repeated in the IEPR. As discussed extensively in the Weisskopf Comments, there are a number of flaws in the methods used to extrapolate from actual carcass counts to the estimated total number of fatalities. The total carcass count under the Smallwood/Thelander study over the entire 4+ years studied was 1,162 birds of all types (about 260/year), of which 519 were raptors (about 120/year). The various extrapolations employed turned 260 carcasses/year into 4,700 carcasses/year.[7]

The mortality range stated in the report is also misleading, because it lumps together protected and "high value" birds with non-native birds and those that can legally be poisoned because they are considered agricultural and environmental pests. Specifically, in the searcher efficiency and scavenging-corrected species estimates, the annual fatality prediction for the European starling (considered to be a non-native pest) is 1,633 birds per year, and the rock dove (pigeon) is 2,527 birds per year. Subtracting these figures from the 4,721 high-end annual fatality total given in the EPR and underlying reports would not be accurate either, however, because the species mortality projections in the Smallwood/Thelander Report are not accurate.

Not only should the Commission not reproduce these misleading and inflammatory numbers in its IEPR report, but it should take steps to remove these figures from its publicly available materials. In addition, the Commission should subject the Smallwood/Thelander Report to peer-review and comment by interested parties. The Commission provided no opportunity for public review and comment on this report at any stage during the process and, although a portion of the Smallwood/Thelander study data was recently released to CalWEA, the majority remains unavailable. The Commission has a responsibility to ensure that all of the data are immediately released to the public.

2. There Is No Evidence That Wind-Related Avian Fatalities Are Biologically Significant

As suggested (but not emphasized) in the EPR (at p. 10), wind-related avian fatalities have not been evaluated for population-level effects:

> Wind energy offers tremendous promise as a non-polluting, commercially viable alternative energy resource. Yet impacts to raptors like hawks and eagles continue at *potentially* significant levels" (emphasis added).

[7] See Smallwood/Thelander Report, pp. 65 and 73.

As pointed out by Weisskopf, biological significance has not been shown either by the Smallwood/Thelander Report[8] or by the Energy Commission.[9] This has important implications for the Commission's recommendations regarding mitigation and other policies, as discussed below. It is particularly important in evaluating projects in the context of the California Environmental Quality Act (CEQA), which requires regulatory agencies to impose mitigation measures only for significant effects on the environment and requires those measures to be proportional to the impacts.

3. Avian Issues Are a Constraint to Development Only In the Altamont and Do Not Constitute a "Serious Constraint" to Wind Development Statewide

The EPR states, at p. 15, "avian collisions with wind turbines have become a serious constraint to repowering and expansion." This statement is accurate only in the Altamont, and in the Altamont only to a certain extent. As other Energy Commission reports show, the remaining development potential at the Altamont constitutes a very small fraction of the potential generation from wind statewide.[10]

Given this faulty premise, the EPR's conclusion (at p. 15) that "Statewide standards could … remove a significant environmental barrier to increasing wind energy in the state" is inaccurate. Likewise, the EPR statement (at p. 16) that "developing mitigation measures for implementation would allow for continued use of the wind resources in Solano County" implies inaccurately that continued use of the wind resource in Solano is not presently possible, which is at odds with the County's recent issuances of conditional use permits for wind projects. (High Winds Project, 2003, Shiloh I Project, 2005.) It also overlooks the fact that Solano County is already imposing mitigation measures for avian impacts.

4. Mitigation Strategies Must Be Based on Sound Mortality Research

In certain places, the EPR appropriately indicates that further research is necessary to determine which mitigation measures are effective.[11] Yet, the EPR also states (at p. 16):

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[8] Smallwood and Thelander (p. 11, 76, 353-354). *E.g.,* "The scope of the present study would not allow inferences of population-level or regional impact assessments to be made, but it is important to consider that these impacts are *possible*, and they are *worthy of additional research*." (Emphasis added.)

[9] Avian Assessment, p. 11.

[10] California Energy Commission, "Renewable Resources Development Report" (500-03080F), November 2003. The Table p. C-12 on California Technical Potential shows just 129 MW of additional potential wind capacity in Alameda County and just 26 MW in Contra County, as compared to some 14,000 MW elsewhere in the state.

[11] *E.g.,* at p. 6 "New research funded by the Energy Commission's Public Interest Energy Research Program *seeks to determine* what mitigation measures can effectively reduce bird kills at the Altamont Pass to a level that allows for expansion and repowering." And, at p. 16, "PIER-EA funded studies to develop a list of mitigation measures that *could* reduce bird kills." (Emphases added.)

> As the next step, industry *needs to implement* and monitor those mitigation measures *Altamont-wide* to determine their effectiveness. Two measures that *would reduce* bird kills by eliminating spinning turbine blades are seasonal shutdown (winter months) or removal of wind turbines in the highest-risk areas."

More generally, the EPR states (at p. 106):

> [S]taff believes the Energy Commission may want to consider various policy options that are included in the 2005 Environmental Performance Report white paper entitled *Assessment of Avian Mortality from Collisions and Recommendations*.

Except for bringing power poles to APLIC standards and removal of met towers and guy wires, no other mitigation measure listed in the Avian Assessment has been tested and the effectiveness of these measures is therefore hypothetical. Among these, the Avian Assessment (based largely on the Smallwood/Thelander Report and the Smallwood/Spiegel adaptive management plan[12]) contains the recommendation for a winter shutdown.[13] Not only is this measure untested, but as with many other proposed measures, it is based on underlying assumptions that have not been subjected to peer-review, let alone proven.

Figure 2-5 (p. 36) in the Smallwood/Thelander Report – a report described in the EPR as the "most comprehensive study at the Altamont … focused on trying to better understand the causes of bird mortality" (EPR at p. 85) – shows that the number of fatalities in winter and summer in the Altamont Pass are grossly disproportionate (e.g., fatalities in the winter are approximately 2.5 times those in the fall). This conclusion is stated on p. 3 of the Executive Summary as well. Figure 2-5 implies higher winter mortality because it shows that more carcasses were found in the winter. There is a simple possible explanation for this: more turbines were searched in winter than any other season. To explain the flaw in the Smallwood/Thelander Report, we provide a simplified example, leaving spring season out for simplicity:

> Assume that Figure 2-5 shows 20 carcasses for winter, 18 for summer, and 10 for fall. The report says, correctly, that more fatalities were found in winter. For this example, assume they searched turbines 10 times in winter, 6 times in summer, and 5 in fall. Correcting for the different number of searches, winter would have 2 carcasses per search, summer 3 carcasses per search, and fall 2 carcasses per search. Smallwood and Thelander gave search-corrected numbers in the appendix 500 pages later (Appendix p. D-21) and showed summer mortality higher for all birds combined, with winter and summer the same looking at raptors only.

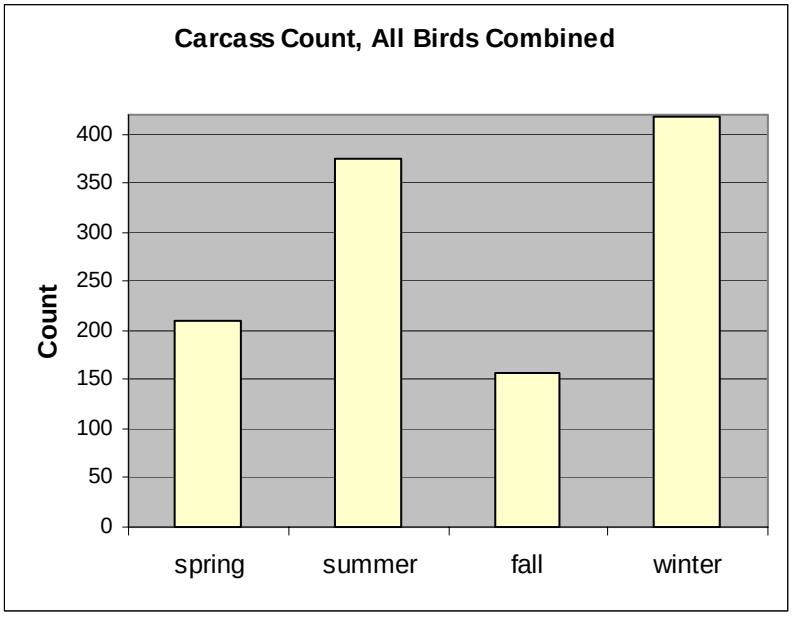
[12] S. Smallwood and L. Spiegel, "Assessment to Support an Adaptive Management Plan for the APWRA", California Energy Commission, January 2005.

[13] The Weisskopf Comments describe many examples in addition to what we discuss here.

Further, each season is normally equated with a quarter of the year. But "fall" in the Smallwood/Thelander Report is half as long as winter, so there should be half as many carcasses found during the fall season compared to winter. With the assumed numbers above -- 2 carcasses/search for both fall and winter -- fall is two times worse for the birds. No correction was made for season length in the Smallwood/Thelander study.

Finally, there were two sets of turbines studied. The larger turbine set (2,500 turbines) was never searched in summer at all, yet the fall/winter/spring carcasses were used anyway in the seasonal mortality analysis.

When the Smallwood/Thelander figures are appropriately adjusted based on the information on Appendix p. D-21, Figure 2-5 as shown in the Report (recreated below) becomes the figure shown on the next page, and <u>summer replaces winter as the season of highest mortality</u>.



A reproduction of Figure 2-5, Smallwood/Thelander Report, p 36.

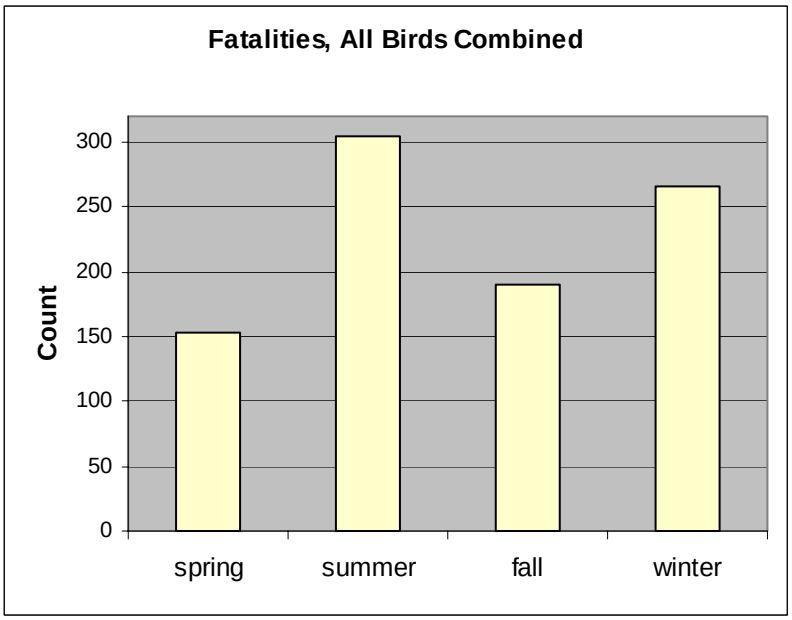


Figure 2-5 corrected based on data from Smallwood/Thelander Report, p. D-21.

If the assumption that winter is the season associated with disproportionate mortality is wrong, then the predicted reduction in mortality by turning the turbines off during the winter will be wrong, too. Despite the uncertainties inherent in the underlying study, the uncertainty falls away in the EPR, which (at p. 6 and p. 76) states as fact that "bird collisions are highest" in the winter season. The justification for the winter shutdown presumably is this higher winter mortality. Though this justification is not stated in the reports, it was implied by CEC staff at a recent workshop.[14]

Compounding this problem is a lack of understanding of the potential causes of mortality. As pointed out in the Weisskopf Comments, seasonal avian mortality is not correlated with power production (i.e., rotating blades). And yet the Smallwood/Thelander Report assumes, in its projections of reduced mortality from a winter shutdown, that no birds are killed by non-operating turbines, despite the extensive literature on avian mortality caused by immobile objects such as smokestacks and telephone poles.[15]

Because of these and many other flaws in the research,[16] any Commission recommendation for winter shutdown as a mitigation strategy would be unlikely to result

[14] California Energy Commission, Transcript of day 2 (June 28) of Committee Workshop on Electricity Environmental Performance Report, June 2005, p 195 - 196. (Linda Spiegel stated, "you may want to look at the seasonal [mortality] differences when you determine when to shut your turbines down.")

[15] See Weisskopf Comments, p. 7

[16] For example, nearly all dead birds were assumed to be turbine kills, as compared to another CEC consultant study in which just 55% of dead birds were attributed to turbines. (S. Orloff and A. Flannery, "Wind Turbine Effects On Avian Activity, Habitat Use And Mortality In Altamont Pass And Solano County Wind Resource Areas," California Energy Commission, grant 990-89-003,

in the projected reduction in mortality; further, such a recommendation would be reckless until there is a sound scientific basis. The same is true of many other of the untested mitigation measures proposed in the Avian Assessment, as described in the Weisskopf Comments.

As discussed in the EPR (at p. 85), many (untested) mitigation strategies are being implemented by Buena Vista (a CalWEA member) in the course of its repowering project. These measures will be studied and may provide evidence of effectiveness that would justify widespread application of some measures. Ironically, Buena Vista, whose new permits incorporate many of the latest Smallwood/Thelander Report recommendations and whose future operation is widely viewed as an important test of these new measures, may have trouble maintaining its financing given the current climate of litigation (litigation that enlists the conclusions of the Smallwood/Thelander Report) and regulatory uncertainty.

Finally, mitigation measures that are applied to the Altamont should not be assumed to be necessary or appropriate for other wind resource areas unless significant problems are documented and appropriate site-specific mitigation measures designed.

6. There Is No Need To "Confirm" Low Mortality In Tehachapi, Pacheco and San Gorgonio. If Additional Studies Are Conducted, Appropriate Methods Must Be Used

The EPR states that:

-- "studies completed in Tehachapi Pass, San Gorgonio Pass, and Pacheco Pass "report lower bird use and fatality rates" (at p. 6);

-- "new information [from NREL] on the bird risk in the Tehachapi Pass is now available, and a comprehensive study of San Gorgonio Pass as well as a companion document comparing the bird risk at both areas may soon be published" (at p. 84); and that

-- "based on research results it may be appropriate for the Energy Commission *to encourage repowering and expansion* in these areas" (emphasis added) (at p. 16).

Yet the EPR also states (at p. 6) that "[s]tudies using *more current research protocols* could *confirm* that birds and bats are not as heavily impacted in these areas, which would allow for more wind development and lower rates of avian mortality than at Altamont Pass" (emphasis added).

A few points are in order. First, what constitutes "more current research protocols" is not defined. As evidenced by our discussion of the Smallwood/Thelander Report, "more current" does not necessarily mean "better." Before additional research is conducted, the methods currently being employed by Commission-funded consultants require peer- and

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1992.) See Weisskopf Comments for a description of other problems, such as a lack of baseline mortality measurements.

public review.[17] Second, as noted above, avian fatalities are not a constraint to development in areas outside of the Altamont. Third, the Commission ought not to expend resources when there is no evidence of a problem.

Likewise, without evidence of a problem, there is no need to study statewide impacts on bats, as recommended, or to "design mitigation measures to reduce bat collisions with turbine blades" (EPR at p. 16). Where there is a significant problem, bat carcasses are unlikely to be missed in routine carcass searches, so there is no need to study bats in particular. A 2004 Tehachapi assessment conducted for NREL found only one bat carcass.[18] Although some bat mortality has been noted with the High Winds project in Solano County, there is no evidence that this mortality is biologically significant.[19] A forthcoming San Gorgonio study by NREL should indicate whether bat mortality is an issue there.

On p. 16, the EPR states:

> Past research shows that bird use for several raptor species is higher in the Solano County Wind Resource Area than at the Altamont Pass. Recent post construction carcass surveys for the High Winds Project indicate a high rate of bird mortality. High bat fatalities are a newly identified issue in Solano County; the extent of which is uncertain. There is insufficient information on bird and bat fatality rates in the entire Solano County Wind Resource Area.

In fact, recent studies in Solano County show that American Kestrels and Red-tailed Hawks are more abundant than in the Altamont Wind Resource Area but not as high as stated in the Avian Assessment.[20] American Kestrels and Red-tailed Hawks are two of the most common (abundant) raptor species and are neither endangered nor threatened under state or federal law. Additionally, contrary to statements made in the Avian Assessment, mortality rates for raptors in Solano County are significantly lower than in the Altamont,[21] except for American Kestrels. Golden eagle mortality in particular is significantly lower in Solano County than in the Altamont.[22]

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[17] At the June 28, 2005, workshop on the EPR report, FPL Energy presented recommendations for an open and transparent scientific review process of all Energy Commission-sponsored research and recommendations. CalWEA would strongly support a Commission effort to adopt such procedures. (See "Presentation on Avian Issues on behalf of FPLE Energy, PPM Energy, Altamont Winds, EnXco, and GREP, June 28, 2005.)

[18] Richard Anderson, et. al. 2004 (at p. 13). Avian Monitoring and Risk Assessment at the Tehachapi Pass Wind Resource Area. Prepared for the National Renewable Energy Laboratory. Colorado. Contract No. DE-AC36-99-GO10337.

[19] Curry & Kerlinger, 2005. (Comparing unadjusted counts from High Winds Project Post-Construction Survey and Smallwood & Thelander (2004).

[20] Curry & Kerlinger 2004. 2005. (Pre and Post Consturction Surveys of High Winds Project, Solano County, Pre-construction Avian Risk Analysis, Shiloh Project, Solano County.)

[21] *Id* Note 19.

[22] *Ibid.*

7. The Suggestion That The Migratory Treaty Bird Act Should Be Used As a Tool to Reduce Fatalities Is Inappropriate

The EPR states (at p. 6), "Most species of birds and raptors are protected under the Migratory Treaty Bird Act and the Bald Eagle Protection Act, but neither statute is being used effectively to reduce fatalities of hawks and eagles." And (at p. 15), "most bird species being killed are protected under state and federal laws and are thus of concern to the public at large as well as environmental and wildlife law enforcement officials."

These statements imply that these federal statutes should be used as tools to reduce avian fatalities. As more appropriately stated by the USF&WS, "the Service attempts to work with those industries and individuals whose actions result in bird deaths, rather than pursuing criminal prosecution first."[23] This is especially relevant to wind-related avian fatalities, given the larger context described in section B.1, above.

Biological significance cannot be judged by lack of compliance, or indeed, compliance with, the Migratory Bird Treaty Act or even the Endangered Species Acts. Just as the taking of birds in full compliance with those Acts can be biologically significant to a species, so too can the incidental taking of birds protected by those Acts be less than biologically significant. Each analysis must be species and site specific.

While CALWEA agrees that reasonable and appropriate mitigation measures should be investigated and adopted, mitigation (and enforcement actions) should be proportional to the significance of the impact. As discussed above, the Avian Assessment provides no data on or discussion of whether the rates of fatalities are biologically significant to bird or bat populations.

8. Avian Studies and Mitigation Are Being Appropriately Handled By Local Agencies

The EPR contains several statements suggesting that the local permitting process is inadequate to the task of avoiding "another Altamont." While it is true that the initial development at the Altamont occurred before either local agencies or the industry were sufficiently attuned to the avian fatality issue, times have changed.

We respond to particular EPR statements (all on p. 15) in this regard. The EPR states "to lower risks to birds, the developer should conduct protocol level bird use surveys prior to development." These studies are routinely required by local agencies in their role as the lead agency implementing CEQA. For example, Solano County is already requiring pre-construction and post-construction surveys as part of wind development projects to address siting and mitigation issues. The surveys have resulted in adjustments to project siting to take into account topographic features, and to avoid impacts to hunting and nesting activities. With respect to mitigation, the County has required off-site conservation easements, contributions to avian research efforts and the potential

[23] USF&WS *op. cit.* p. 2.

relocation of turbines that are shown to cause disproportionate mortality found during post-construction monitoring.

The EPR states, "Expansion or repower projects should be required to incorporate mitigation measures and monitoring, and to report the results so fatality rates and mitigation efficacy can be assessed. Using that information, they can then site turbines to avoid areas of high avian use." Consider a motion adopted this month by the Alameda County Board of Supervisors containing conditions of approval for the Conditional Use Permits of the existing projects. The conditions include: formation of a scientific review committee; intensive county-managed monitoring to provide data for the EIR process; a repowering program that requires each company to repower 10% of its turbines by year 4 and 100% by year 13 (with interim steps in between); an EIR that will focus on repowering and other issues; shut down of the most dangerous 2% of turbines immediately; a 3.5-month winter shut down; an off-site mitigation program; and implementation of proven mitigation measures, all paid for by the industry and with no opt-out for financial hardship.[24] The Board will vote on the final conditions at its September 22, 2005, meeting.

Contrary to the EPR's statement that "[s]tatewide guidelines for wind energy projects may be an appropriate way to gain consistency statewide when developing and mitigating projects," environmental assessment is highly site-specific. County-level control of the process is therefore appropriate.

Frankly, in view some of the recent work done by the Commission in this subject area as discussed above, the Commission has not garnered the wind industry's confidence in terms of its ability to conduct sound environmental science. We cannot support the notion of the CEC coming up with a second set of rules layered on top of existing state and local requirements.

[24] This is not to suggest that the wind industry necessarily agrees that all of these measures are well-founded.

C. CONCLUSIONS

The wind industry recognizes the importance of minimizing avian fatalities and is committed to working with the Energy Commission toward that goal. We urge the Commission to ensure that the reports it publishes are based on sound science, so that effective mitigation measures can be implemented while enabling the wind industry to contribute to the state's clean energy goals.

Respectfully submitted,

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